In re Appln. of: LeRoy G. Hagenbuch
Application No. 09/593,647

CLAIM AMENDMENTS

1. (Currently Amended) A method of loading material into a dump body of a truck whose sidewalls are spaced relatively wider than conventional dump bodies whose ~~of similar~~ volumetric capacity is approximately the same, the method comprising:

filling the loading bucket with an amount of earthen material, where the loading bucket has a volumetric capacity that is approximately 1/4 or more than a volumetric capacity of the dump body;

lowering the bucket into the body so that the bucket is approximately centered over a floor of the body; and

freeing a swinging door so as to open the bucket and allow the material held in the bucket to drop into the dump body, whereby the door swings open and clears both the sidewalls and the floor of the dump body while minimizing the height from which the material is dropped from the bucket.

2. (Currently Amended) A body of a vehicle for hauling material, the body made by the following process:

(a) determining a desired location for a load center of gravity on a chassis of the vehicle;

(b) determining a desired volumetric capacity for the body;

(c) developing a three dimensional volumetric model of a load to be carried in the body on the chassis that includes corner voids, using data collected from an anticipated point of use;

(d) adjusting a set of design parameters of the body until the load center of gravity for the three-dimensional volumetric model of the load is located proximate the desired location for the load center of gravity on the chassis and the volume of the three dimensional volumetric model approximates ~~is substantially similar to~~ the desired volumetric capacity~~, including curving a rear edge of the floor to correspond with the corner voids in the three-dimensional volumetric model~~; and

(e) producing the body in accordance with the set of design parameters.

3. (Currently Amended) A body of a haulage vehicle made by a process comprising:

(a) modeling a shape of a load of heaped material in three dimensions, where the shape of the load of heaped material is substantially conical;

(b) modeling a body to hold the substantially conically shaped load of heaped material, where a shape of the body is determined by predetermined parameters ~~including a rear edge of a floor of the body that is curved to correspond with the conical shape of the load of heaped material~~; and

(c) producing the body according to values of the predetermined parameters resulting from modeling of the body.

4. (Allowed) The body of claim 3 where the predetermined parameters include one or more of (1) a position of the body's floor, (2) a position of the body's sidewalls (3) a length of the floor, (4) a height of sidewalls, (5) a distance between the respective sidewalls and (6) a position of the body front wall.

5. (Allowed) The body of claim 3 including adjusting the predetermined parameters to locate a location for a center of gravity of material held in the modeled body that approximates a lowest possible position for the center of gravity.

6. (Allowed) The body of claim 3 further including adjusting the predetermined parameters to allow material to be dropped into the modeled body from a lowest practical vertical elevation over a floor of the body.

7. (Allowed) The body of claim 2 where the set of design parameters includes one or more of (1) a position of the body's floor, (2) a position of the body's sidewalls (3) a length of the floor, (4) a height of sidewalls, (5) a distance between the respective sidewalls and (6) a position of the body front wall.

8. (Allowed) The body of claim 2 wherein the three dimensional volumetric model is substantially conical.

9. (Allowed) The body of claim 2 including adjusting the set of design parameters such that the location of the load center of gravity for the three-dimensional volumetric model of the load approximates a lowest possible location while maintaining proximate alignment with the desired location for the load center of gravity.

10. (Allowed) The body of claim 2 further including adjusting the set of design parameters to allow material to be dropped into the body from a lowest practical vertical elevation over a floor of the body.

11. (New) The method of claim 1 wherein lowering the bucket into the body and freeing the swinging door are facilitated by providing sidewalls of the dump body that are relatively shorter than sidewalls of the conventional dump bodies.

12. (New) The method of claim 1 including repeating filling, lowering and freeing until the load carried by the body reaches its volumetric capacity and is distributed substantially evenly between the sidewalls.

13. (New) The method of claim 1 including incrementally increasing a load carried by the dump body by repeating the filling, lowering and freeing such that the load heaps substantially evenly between the sides of the body.

14. (New) The method of claim 1 including incrementally increasing a load carried by the dump body by repeating the filling, lowering and freeing such that the load is substantially centered in the body.

15. (New) The body of claim 2 wherein adjusting a set of design parameters of the body includes curving a rear edge of the floor to correspond with the corner voids in the three-dimensional volumetric model.

16. (New) The body of claim 3 wherein the predetermined parameters include a curved rear edge of a floor of the body complementing the conical shape of the load of heaped material where the load meets the floor.

17. (New) The body of claim 3 wherein the shape of the load is dependent on a type of the material.

This listing of claims replaces all prior versions, and listings, of claims in the application.